

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representation of
The original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

1 / 10

1	15	16	30	31	45	46	60	61	75	76	90
1 mtbider	MNEIVDTTEMYLRTI	YDLEEEGVTPPLRARI	AERLDQSGPTVSQTV	SMERDGLLRVAGDR	HELTETKRALAIAV	MRKHLRLAERLLVDI					
2 dtxr	MKDIVDTTEMYLRTI	YELEEEGVTPPLRARI	AERLEQSGPTVSQTV	ARMERDGLVYVASD-	SLQMTPTGRTLATAV	MRKHLRLAERLLTDI	89				
3 staphepisirr	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	65
----- -HTVSCPPPS--T SEREQ-----ARAL CURLLTARSRTRAEL AGQLAKRXPEDIGN RVLDRLAvgLVDDT											
91	105	106	120	121	135	136	150	151	165	166	180
1 mtbider	GLPWEEVHDEACHE	HVMSDEVERRLKVY	NNPFTSPFGNP1PGL	VELGVGPGEGADDAN	LVALTELPAGSPVAV	VVROLTEHVGQGDIDL					
2 dtxr	GLDINKVHDEACHE	HVMSDEVERRLKVY	DVSF-SPFGNP1PGL	DELGVGNS--DAAAP	GTRVIDAATSMPRKV	RIVQ1NE1FQVETDQ	176				
3 staphepisirr	DFAEQMVQSRRRANA	KSKRALAELIAKGV	DDDUVTTVLGGIDAG	AERGRAEK--LVRAR	LRREVLDGTDEAR	VSRRLVAMLARRG-Y	152				
161	195	196	210	211	225	226	240	241	255	256	270
1 mtbider	ITRLKDAVGVPNARV	TVETTPGGVIVIP	GHENVTPLIENAHAV	KVEKV	230						
2 dtxr	FQLLDADIVGSEVE	IVDRO--GHTILSHN	GKD-VELDDLAINTI	R1EEL	223						
3 staphepisirr	GQTlacevviaelaa	ERERR--RV-	-----	-----	174						

FIGURE 1

2/10

1	15	16	30	31	45	46	90					
1	ML.	MINDVDTTEWLUU	TYLLEEGIVTPLR	IAER---	PTVSOT	VSMERDGLLRVA	RHLETTKGRAMAIA	WHRKHLAERLLDV	85			
2	TB	MNELVDTTEWLUU	YOLEEG-VTPLR	IAERLQDGSPTVSOT	VSMERDGLLRVA	GHD RHLETTKGRAMAIA	WHRKHLAERLLDV	89				
3	Ms	MNDVDTTEWLUU	YOLEEG-VRPLR	IAERLQDGSPTVSOT	VSMERDGLLRVA	GHD RHLETTKGRAMAIA	WHRKHLAERLLDV	89				
4	Mtb	MTRVSCPPSTSER-	---	FEQARALCLRL	TARS---	RTRAL	ACOLAKRGYPEDIGN	RWLD----	70			
91	105	106	120	121	135	136	150	151	165	166	180	
1	ML.	IGLPHEEVHAEACRW	EHVMSEDVERRLIKU	LNNPTSPFGNPIPG	LLDUGAGP	GDASANA	KLVLT	TELPSSPVA	VVURVOLTE	IVD-DID	174	
2	TB	IGLPHEEVHAEACRW	EHVMSEDVERRLIKU	LNNPTSPFGNPIPG	LVELGVR	PGREGDA	NWVLT	TELPSSPVA	VVURVOLTE	IVGDDID	179	
3	Ms	IGLPHEEVHAEACRW	EHVMSEDVERRLIKU	LENPTSPFGNPIPG	LTELAVTPG	UNTEDV	SLVAL	TELPSSPVA	VVURVOLTE	IVGDDID	179	
4	Mtb	---	WVQS-RRANA	KSKRALAELHAKV	DODVITV	LGG-IDA	GAERGR-	AEKLVR	RURREVL	DDCTDEA	RVSRRLVAMLA---	148
181	195	196	210	211	225	226	240	241	255	256	270	
1	ML.	LITRKLDTGVURNAR	VTVESTPAGNVI	PGHENUTLPIEMAH	VKVEKV--	--	225	--	225	--	174	
2	TB	LITRKLDTGVURNAR	VTVESTPAGNVI	PGHENUTLPIEMAH	VKVEKV--	--	230	--	233	--	174	
3	Ms	LIGRLKEAGVUPNAR	VTVEANNGGVWIVI	PGHEQVELPHMHA	VKVEKV	--	233	--	233	--	174	
4	Mtb	---	RCYQGTACEV	VIAELAERERRV-	---	---	---	---	---	---	174	

FIGURE 2

1	10	20	30	40	50	60				
B1 DtxR	MKDLVDTTEM	YLRTIYELEE	EGIVPLRARI	AERLEQSGPT	VSQTVARMER	DGLVHSPDR				
Cd DtxR	MKDLVDTTEM	YLRTIYELEE	EGVTPLRARI	AERLEQSGPT	VSQTVARMER	DGLVVVASDR				
Mt IdeR	MNELVDTTEM	YLRTIYDLEE	EGVTPLRARI	AERLDQSGPT	VSQTVSRMER	DGILRVAGDR				
Ms IdeR	MNDLVDTTEM	YLRTIYDLEE	EGVVPPLRARI	AERLDQSGPT	VSQTVSRMER	DGILHVAGDR				
Ml IdeR	MNDLVDTTEM	YLRTIYDLEE	EGIVTPLRARI	AER	PT	VSQTVSRMER				
Sl DesR	MSGLIDTTEM	YLRTILELEE	EGVVPMPRARI	AERLDQSGPT	VSQTVARMER	DGLVSVAADR				
Se SirR	M	LTEEKED	YLKAILTNNDG	DVSFVSNKKL	SQFLNIKPPS	VSEMVGRLEK EGYVETKHYK				
Sa SirR	M	LTEEKED	YLKAILTNNG	DKNFVTKIL	SQFLNIKPPS	VSEMVGRLEK AGYVETKPYK				
Ef	M	TPNRED	YLKLIFELGG	DEVKVNKKOI	VSGLDVSAAS	VSEMIISKLVK EDLVEHSPYQ				
Sg	M	TPNKED	YLKCLYELGT	RHNKITNKEI	AGLMQVSPPA	VTEMKKLLA EELLIKDKKA				
Sm	M	TPNKED	YLKIIYELSE	RDEKISNKOI	AEKMSVSAPA	VSEMVKKLLL EDLVLKDQQA				
Spn	M	TPNKED	YLKCIYEIGI	DLHKITNKEI	AARMQVSPPA	VTEMIKRMKS ENLILKDKEC				
Spy	M	TPNKED	YLKCIYEIGI	DLHKITNKEI	AARMQVSPPA	VTEMIKRMKS ENLILKDKEC				
CONSENSUS	M	-----E*	YL*-I*-----	-----NK--	-----P-	*****-**-L-----				
		70	80	90	100	110	120			
B1 DtxR	SLEMTPGRS	LAIAVMRNDR	LAERLLTDII	GLDIHKVHDE	ACRWEHVMSD	EVERRLVEVL				
Cd DtxR	SLQMTPTGRT	LATAVMRKHR	LAERLLTDII	GLDINKVHDE	ACRWEHVMSD	EVERRLVKVL				
Mt IdeR	HLELTEKGRA	LAIAVMRKHR	LAERLLVVDI	GLPWEEVHAE	ACRWEHVMSE	DVERRLVQVL				
Ms IdeR	HLELTDKGRA	LAVAVMRKHR	LAERLLVVDI	LPWEDGVHAE	ACRWEHVMSE	EVERRLVQVL				
Ml IdeR	HLELTTKGRA	MAIAVMRKHR	LAERLLVVDI	GLPWEEVHAE	ACRWEHVMSE	DVERRLIKVL				
Sl DesR	HLELTDEGRR	LATRVMRKHR	LAECLLVDVI	GLEWEQVHAE	ACRWEHVMSE	AVERRVLELL				
Se SirR	GARLTEEGLK	QTLDIICKRHR	LLRLFLIEIL	QYNWEEVHQE	AEILEHRISD	LFVERLDKIL				
Sa SirR	GVRLTEDGLT	HTLDII	RRLLELFIEIL	KYNWEEVHQE	AEILEHRISD	LFVERLDSL				
Ef	GVQLTEKGLK	KASTLIRKHR	IWEVFLVHEL	NYTWNNDVHEE	AEVLEHTVTSQ	TIVNRLADYL				
Sg	GYLLTDGLK	LVSDLYRKHR	LIEVFLVHHL	GYTTEEIHEE	AEVLEHTVSD	HFVERLDQLL				
Sm	GYLLTKKGQI	LASSLYRKHR	LIEVFLMNHL	NYTADEIHEE	AEVLEHTVSD	VVERLDKFL				
Spn	GYLLTDGLK	LVSELYRKHR	LIEVFLVHHL	DYTSQDQIHEE	AEVLEHTVSD	LFVERLDKLL				
Spy	GYLLTDGLK	LVSELYRKHR	LIEVFLVHHL	DYTSQDQIHEE	AEVLEHTVSD	LFVERLDKLL				
CONSENSUS	---	LT-G	-----	HR L	---L	-----	H-E A	---EH-S	-----R	---L
	130	140	150	160	170	180				
B1 DtxR	DDVHRSPFGN	PIPGLGEGIQL	DQADEPDGTV	RAIDLPLGEN	LKARIQVNE	ILQVDLEQFO				
Cd DtxR	KDVSRSRSPFGN	PIPGLDELGV	GNSDAAAPGT	RVIDAATSMR	RKVRIQVINE	IFQVETDQFT				
Mt IdeR	NNPTTSPFGN	PIPGLVELGV	GPEPGADDAN	LVRLTTELPAG	SPVAVVVQL	TEHVQGDIIDL				
Ms IdeR	ENPTTSPFGN	PIPGLTTELAV	TPGVNTEDVS	LVRLTTELPVG	MPVAVVVQL	TEHVQGDTDL				
Ml IdeR	NNPTTSPFGN	PIPGLLDLGA	GPDASAANAK	LVRLTTELPAG	SPVAVVVQL	TEHV DDIDL				
Sl DesR	RHPTESPYGN	PIPGLEELGE	TDGADPFLDE	GMVSLADLDP	QEGKTVVVR	RIGEPIQTDA				
Se SirR	NFPKTCPHGG	VIP	R	GNSDAAAPGT	SILNFEPGER	VTVRRV RRDK TELL				
Sa SirR	NFPKTCPHGG	VIP	R	NNEYKEKYIT	TILNYEPGDI	VTIKRV RDK TDLL				
Ef	NHPEFCPHGG	VIPEDNQPIH	EEKROTLDY	PVGTKIRIAR	VLDEKELLDY	LVSIDLNIQE				
Sg	DYPKACPHGG	TIPIAKGELLV	EKKHLTLEEA	KEKGDYILAR	VHDNFDLLTY	LERNGLQVKG				
Sm	NYPKVCPHGG	TIPIGHGQPLV	ERYRTTLKGV	TEMGVYLLKR	VQDNFQLLKY	MEQHHLKIGD				
Spn	GFPKTCPHGG	TIPIAKGELLV	EINNLPLADI	KEAGAYRLTR	VHDSFDILHY	LDKHSLLHIGD				
Spy	GFPKTCPHGG	TIPIAKGELLV	EINNLPLADI	KEAGAYRLTR	VHDSFDILHY	LDKHSLLHIGD				
CONSENSUS	--P	--P*G*	-IP	-----	-----	-----				

FIGURE 3

4/10

09868753 10631201A

B1 DtxR	190	200	210	220	230
Cd DtxR	ALTDAGVEIG	TEVDIINEQG	RVVITHNGSS	VELIDDLAHA	VRVEKVEG
Mt IdeR	OLLDADIRVG	SEVEIVDRDG	HITLSHNGKD	VELLDDLAHT	IRIEEL
Ms IdeR	ITRLKDAGVV	PNDARVTVETT	PGGGVTIVIP	GHENVTLPHE	MAHAVKVEKV
M1 IdeR	IGRLKEAGVV	PNDARVTVEAN	NNGGVMIVIP	GHEQVELPHH	MAHAVKKVE KVEKV
	ITRLKDTGVV	PNDARVTVETS	PAGNVIIIP	GHENVTLPHE	MAHAVKVEKV

S1 DesR	QLMYTLRRAG	VQPGSVVSVT	ESAGGVLVGS	GGEAAELEAD	TASHVFVAKR
Sa SirR	VYLSSKDIYI	GNTVEIVSKD	DTNKVIIILKR	NDIVTILSYE	NAMNIFAEK
Sa SirR	IYLSKDISI	GNEVEIVSKD	EMNKVIIIKR	NDNVIIVSYE	NAMNMFAEK
Ef	EYTIKEIAAY	EGPITIYNEN	KELSVSFKAA	NTIFVEPLIR	ESEEN
Sg SgoR	TIRFLGYDDF	SHLYSLEVDG	QEIQLAQPIA	QOIQYVEKI	
Sm SloR	ELRLLEYDAF	AGAYTIEKDG	EQLQVTSAVA	SQIYIEKKAY	
Spn	QLQVKQFDGF	SNTFTILSND	EDLQVNMDIA	KQLYVEKIN	
Spy	QLQVKQFDGF	SNTFTILSND	EDLQVNMDIA	KQLYVEKIN	

CONSENSUS -----

FIGURE 3 cont.

5/10

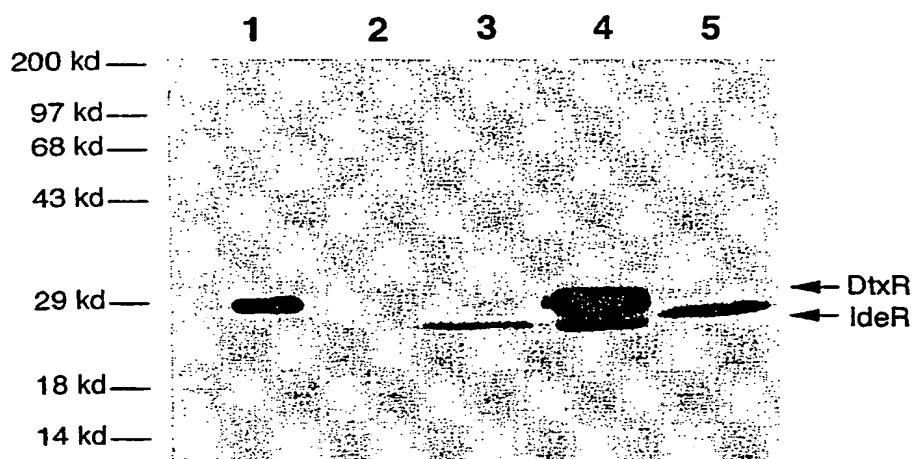


FIGURE 4

6/10

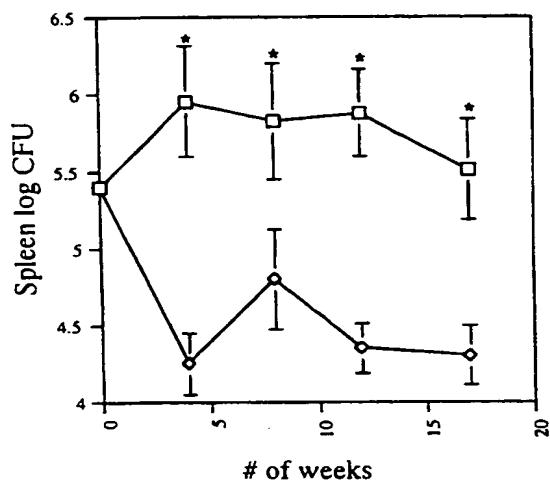


FIGURE 5A

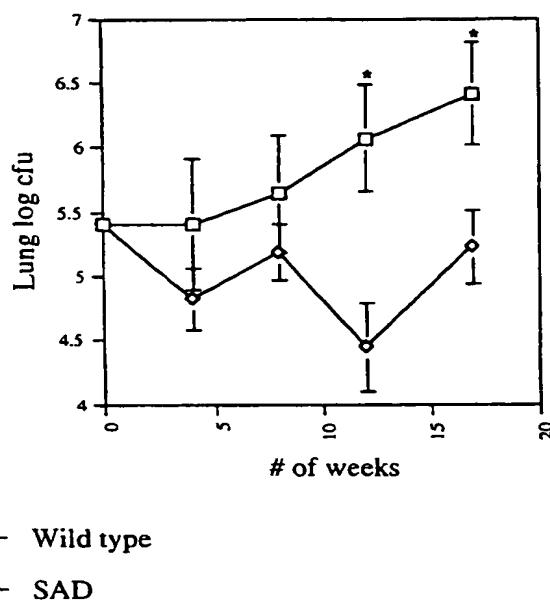


FIGURE 5B

7/10

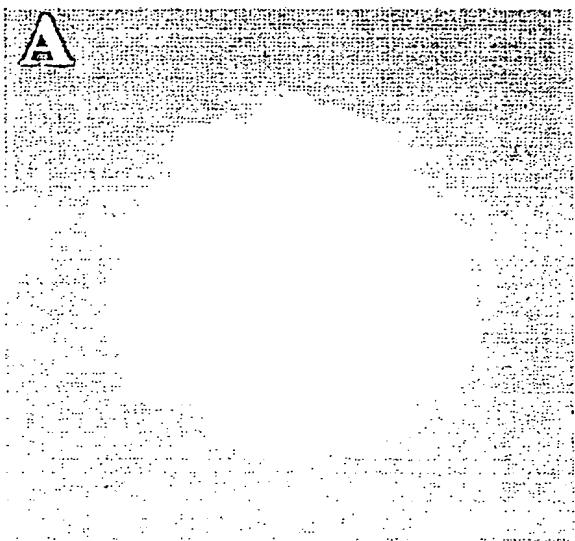


FIGURE 6A

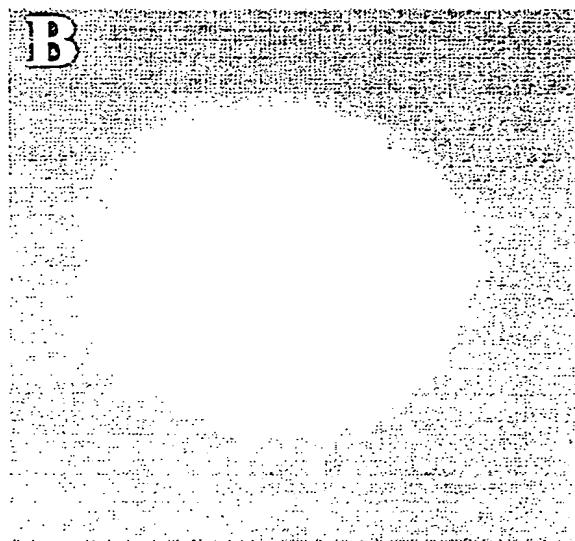


FIGURE 6B

Consensus Sequence											
G	T	A	G	G	T	T	A	G	G	C	T
T	T	A	G	G	A	T	A	G	C	T	T
T	T	A	G	G	T	T	A	C	C	T	A
C	C	A	G	G	G	T	A	T	C	C	T
G	C	A	G	G	C	C	A	G	T	G	T
A	C	A	G	G	T	G	G	T	G	C	T
G	A	A	G	G	T	A	A	C	C	A	A
G	C	A	G	G	T	G	A	C	C	G	A
G	A	A	G	G	T	C	A	C	C	A	G

FIGURE 7

9/10

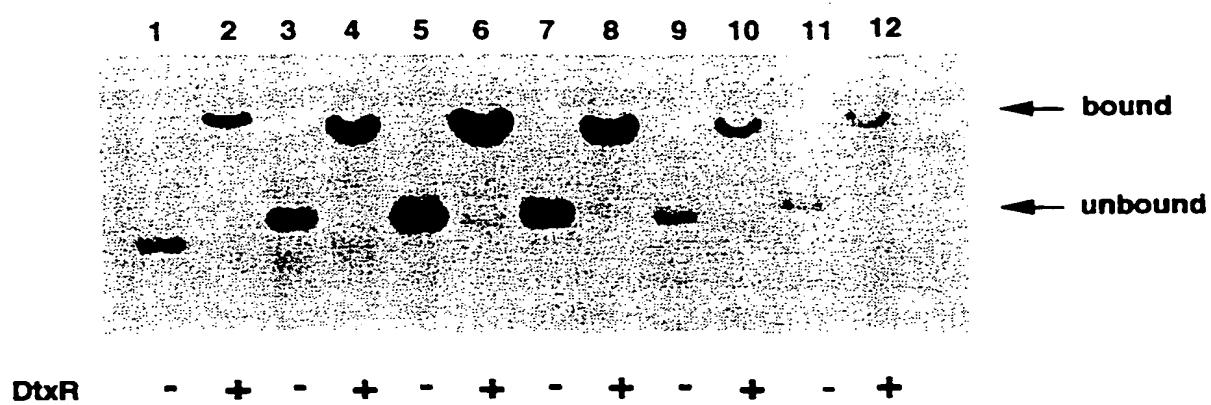


FIGURE 8

10/10

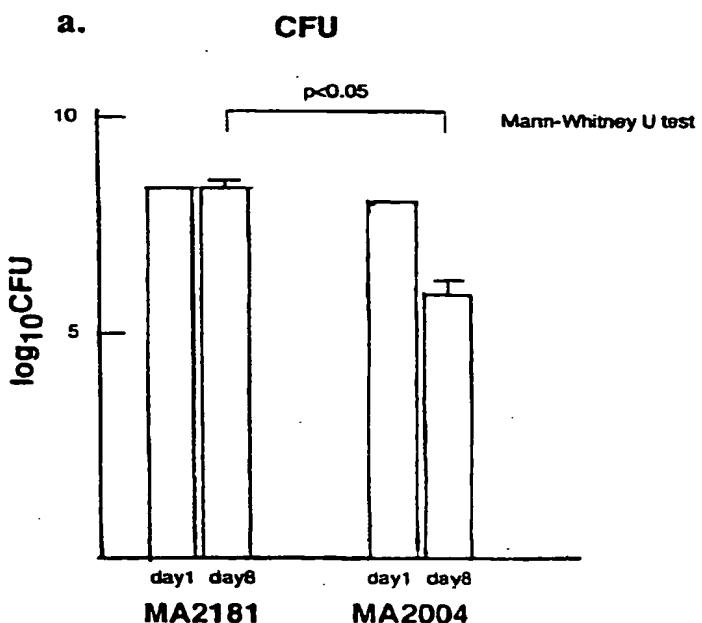


FIGURE 9A

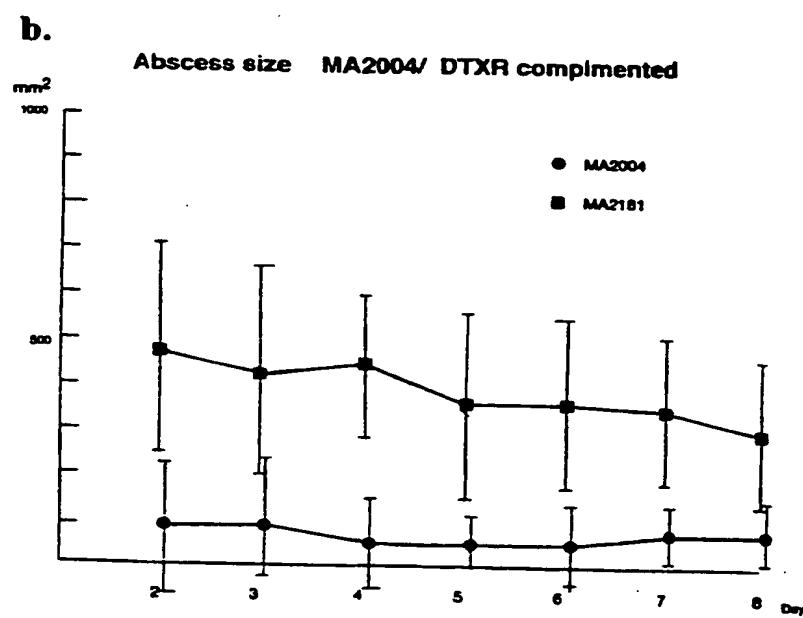


FIGURE 9B